



POW WOW—(l. to r.) Peter MacDonal, Chairman, Navajo Tribal Council, and Bruce Wiley, a member of his staff, talk with Apollo 15 crewmen David Scott and James Irwin. The meeting took place last week near Flagstaff, Arizona during the astronauts' final geological expedition before launch on July 26. At the foot of Gray Mountain near the Little Colorado River Gorge, the area resembles the Hadley-Appenine landing site. Alfred Worden is the third member of the Apollo 15 crew.

## Center hosts Docking Conference

Space negotiations between U.S. and Soviet agencies on compatible docking systems took place last week at MSC. The meetings resulted from an agreement reached in Moscow in October 1970, which sets forth procedures and a schedule for joint efforts to design compatible rendezvous and docking arrangements for the manned spacecraft of both nations.

Three joint working groups met to work out a single set of technical requirements for such a compatible system. Working Group 1 dealt with the com-

patibility of overall methods and means for rendezvous and docking. Working Group 2 discussed compatibility of radio guidance systems, optical and other guidance systems and communications, and Group 3 was concerned with compatibility of docking assembly and tunnel.

Chairman of the three U.S. working groups were Glynn Lunney, Don Cheatham, and Don Wade.

MSC Director Robert R. Gilruth headed the NASA group participating in the meetings. Other NASA personnel who took part included Arnold W. Frutkin, Assistant Administrator for International Affairs; Leroy Roberts, Office of Manned Space Flight; Rene Berglund, Don Cheatham, Clark Covington, R. H. Dietz, Caldwell Johnson,

Jim Jones, Ed Lineberry, Glynn Lunney, Charles Manry, Leonard Nicholson, Richard Reid, Ed Smylie, Don Wade, Jack Waite, and Robert White of MSC; and George Hardy, Melvin Brooks, Glynn Eudy, and Joseph Cremin of Marshall Space Flight Center.

The nineteen-member Soviet delegation was headed by Academician Boris N. Petrov, Intercosmos, who was the principal Soviet representative at the Moscow meeting which drew up the agreement.

On the final day of the conference, Academician Petrov and Dr. Gilruth initialled a "Summary of Results" which is subject to confirmation by the President of the USSR Academy of Sciences and the Administrator of the National Aeronautics and Space

(See DOCKING, page 3)

## NASA studies a new approach to developing Space Shuttle system

NASA is examining the advantages and disadvantages of a "phased approach" to the development of a reusable space shuttle system in which the orbiter vehicle would be developed first and initially tested with an interim expendable booster.

In a "phased approach", full scale hardware development of a reusable booster would be started later, but some design and preliminary development work for it would proceed concurrently with development and test of the orbiter.

For the interim booster, NASA and its industrial contractors will study the use of a modified Saturn IC (first stage of the Saturn V that launches Apollo flights to the moon), a booster based on the Titan III, and a booster system

using solid rockets.

The contractor studies now nearing completion confirm the feasibility and desirability of a reusable Space Shuttle as the key element of a space transportation system which will meet the continuing needs and long-term objectives of the United States in space.

"The preferred configuration which is emerging from these studies," NASA Administrator James C. Fletcher said, "is a two-stage delta-wing reusable system in which the orbiter has external propellant tanks that can be jettisoned."

"Although our studies to date have mostly been based on a 'concurrent approach' in which development and testing of both

(See NEW, page 3)

## Soviet Cosmonauts die during Earth reentry

On Wednesday, June 30 Soyuz 11 cosmonauts Georgi T. Dobrovolsky, Vladislav N. Volkov, and Viktor I. Patsayev were found dead in their spacecraft after what had appeared to be a completely normal reentry into earth's atmosphere.

The three were returning from a 24-day earth orbital mission which saw them unite the Soyuz spacecraft with Salyut, a large instrumented station which was sent aloft without a crew in April, to form a space station.

Their mission was the longest in duration of any manned mission flown by either the United States or Russia.

Dr. Robert Gilruth, MSC Director, expressed the feelings of

many here. "I am very shocked and distressed at the news. It is completely unexpected after what would appear to have been a completely successful mission."

Donald K. Slayton, in a message from the U.S. Astronauts, said, "It is with great sadness we received the news of the tragic ending of Soyuz 11. We share with the world community a deep sorrow for the loss of Cosmonauts Georgi Dobrovolsky, Vladislav Volkov, Viktor Patsayev, and we mourn with all Russian people the deaths of three of their brave countrymen."

At the time the *Roundup* went to press, the cause of death had not been determined.

## Jamaica Survey group finishes sessions here

Jamaican and United Nations officials last week completed a five-day visit to MSC to review earth resources data collected in April.

The island survey was a cooperative effort between the government of Jamaica and the United Nations Food and Agriculture Organization to gather information needed in assessing the island's natural resources, particularly its water resources. Assistance was

also provided by consultants from the U.S. Geological Survey.

The Jamaican group visited MSC to participate in a review of the data acquired during the April mission and to train with analysis equipment prior to returning to Jamaica with the data.

NASA C130B aircraft flights were conducted at the joint request of Jamaica and the U.N. primarily to learn more about the tropical island's water supply. Although Jamaica has an average rainfall of 200 inches, much of the water in the mountain rivers never reaches the reservoirs of Jamaica's cities. It is believed that subma-

(See JAMAICA, page 3)

## Shepard, Stafford assigned new jobs

Colonel Thomas P. Stafford has been named Deputy Director of the Flight Crew Operations Directorate (FCOD), and Captain Alan B. Shepard will resume his previous duties as Chief of the Astronaut Office, it was announced last week.

In addition to taking part in overall management of the directorate, Stafford will assist Donald K. Slayton, the Director of Flight Crew Operations, with a broad range of technical matters relating to flight crew activities.

Stafford, an astronaut since 1962, was pilot of Gemini VI in 1965, command pilot of Gemini IX in 1966, and commander of Apollo 10, which orbited the moon in May 1969. He succeeded Shepard as Chief of the Astronaut Office in August 1969.

Shepard returns to an assignment he had held for several years prior to commanding the January 1971 Apollo 14 lunar landing mission. One of the original astronauts selected in 1959, he flew the United States' first manned space flight in May 1961. The Navy recently selected him for promotion to Rear Admiral.

## Metric System is now in use here

A recent MSC Announcement (71-93) clarified NASA Policy Directive (NPD) 2220.4 which established the use of the International System of Units (SI) in NASA publications.

Specifically, the technical and scientific writings to which the directive pertains are technical reports (TR's), technical notes (TN's), technical memoranda (TM's), contractor reports (CR's), and Special Publications (SP's).

The announcement indicates that expression in both customary and SI units is permissible in cases where using SI units alone would "obviously impair communications or reduce the usefulness of the report to the primary recipient."

The Director of MSC has authority to make exceptions to the policy concerning the use of metric units "if in his judgment use of the SI units would impair the usefulness of the report or result in excessive cost."



of Engineering and Applied Science

Brock, who came to MSC from Marshall Space Flight Center, (See BROCK, page 3)

FOCUS ON A JOB

# Ramirez is fireproof coating expert

Daniel G. Ramirez of the Technical Services Division can do all sorts of interesting things with a substance called fluorel, a non-flammable compound which was used originally to coat the surfaces of the mobile quarantine facilities (MQF).



adds colored powder until the proper shade has been reached.

Once homogenized, the fluorel coating can be applied with a sprayer, brush or roller. Danny maintains, however, that spraying is the easiest and most effective way to apply the coating.

Not only is fluorel fire resistant and capable of being colored, but it also has staying power. Danny notes that in the two years since the MQF's were sprayed with the coating, no fading has occurred.

Danny has coated the ceiling of a United Airlines 727 with fluorel and is now reworking the cushions for another United aircraft by treating the foam rubber and then upholstering with a fluorel-covered material. He traveled to San Francisco to show United technicians how to apply the fluorel and how to measure with a micrometer the proper thickness (number of mils) of the coating for any particular material. He is working now on refurbishing Air Force T-39's.

Danny sees the use of fluorel-treated fabrics, walls, carpets, furniture, etc. as a "coming thing." He adds that fluorel is "something truly wonderful for the protection of people."

Congratulations to Danny Ramirez on a job which he obviously enjoys and does well.

In fact Danny knew so much about the application of fluorel that he was sent to the Airstream Company in Ohio, where the MQF's were being constructed, to show technicians there how to coat surfaces with fluorel.

Danny soaks the off-white, solid fluorel chips (as they come from the manufacturer) in methyl ethyl ketone (MEK) overnight. The next day, during the homogenizing process, he adds more MEK, and, if a color is desired, he



East meets West amicably at the conference between U.S. and Russian space officials on the subject of compatible docking systems. The group included nineteen Soviet members and twenty-two NASA engineers and scientists.

## U. S. - Soviet Docking Discussions, June 21 - 25, 1971



CAMERAS READY — This group of Russians appears to be enjoying the scenery as they cruise the Houston Ship Channel.



Astronaut Fred Haise points out features of a space station mockup during a tour of the exhibit area of the Building 1 Auditorium.



Astronaut Ken Mattingly demonstrates probe and drogue equipment to the group of Russian engineers.



FRAMED BY LM LEGS — The lunar module in the Building 1 exhibit area seems to fascinate the visitors as Dr. Gilruth explains some features of the moon landing vehicle.

### Have A Happy And Safe Fourth of July



Vladimir Syromyatnikov (left) joins Astronaut John Young inside the tunnel in observing docking latches on the command module side of the tunnel.



MSC Director Robert R. Gilruth peers into the command module 1-G trainer which is used for probe and drogue training as Academician Boris N. Petrov, head of the Soviet delegation, observes the trainer from the inside.



Features of an equipment transporter similar to one used on the lunar surface during Apollo 14 are pointed out.

## "Time" has special meaning for collector Daryl Chilcutt

Daryl Chilcutt of the Program Procurement Division was introduced two years ago to what has become a fascinating hobby for him.

Friend and neighbor Dick Igou of General Electric had already developed an interest in clock collecting, and he persuaded Daryl to share in buying an antique shop's entire selection of old clocks, forty in all. With that purchase, Daryl was on his way.

There are two schools of thought among collectors of antique clocks. One school advocates maintaining the authenticity by leaving the exteriors unrefinished; the other believes that no harm is done by refinishing and making the clock attractive for display in the home. Daryl is a member of

Daryl noted that early American clocks differ from European types, French, Swiss, and German. "We built ours here in the United States I guess based on American ingenuity to a great extent."

Early clockmakers faced certain problems. There was a scarcity of materials, both machinery and the brass of which clock movements are made. Additionally, the brass, though not of high quality, was very expensive. Today, Daryl says, a person who wishes to build a clock can go to a store and buy high quality brass.

Mass production was an American innovation in clockmaking. Clocks produced in this manner are highly reliable, Daryl believes. Because such good, inexpensive timepieces result from mass pro-

duction, handcrafting clocks has become almost a lost art. One man in Pearland, Texas is working on a new clock design, and there is a small firm in Massachusetts which produces handmade timepieces. But, Daryl says, the price of handcrafted clocks is extremely high, almost prohibitive for most would-be purchasers.

Daryl is a member of the National Association of Watch and Clock Collectors. He has shown his clocks at gatherings of the Houston chapter of the Association. In addition to the perpetual

calendar clock pictured above and the grandfather clock movement for which Daryl is building a case, his collection includes two Westminster chime clocks, a pocket watch made by New York Standard Watch Company, a simple calendar clock (which does not adjust for Leap Year or 31-day months), and an Ansonia metal clock with a figure of Don Juan, sword in hand, on one side of the clock face, and his opponent, sword poised, on the other side.

Although he has no "goal" for the number of timepieces he hopes to acquire, he would very much like to add a Terry clock to his collection. Terry, a New England clockmaker in the early 1800's, is considered to be the founder of the American clock business, and, Daryl believes, a "Terry" is to the clock world what a "Stradivarius" is to the violin world.

Daryl's wife Jerry, who works in the Preventive Medicine Division, resisted his hobby at first, but according to a reliable source, she has been converted and now enjoys the clocks, many of which are attractively displayed on specially-constructed shelves in the Chilcutt living room.

Anyone who might be interested in learning more about clock collecting or the activities of the Houston chapter of the National Association of Watch and Clock Collectors should call Daryl. He'll be happy to supply prospective collectors with tips on how to get started.

**Docking Meeting**  
(Continued from page 1)

Administration. The delegations discussed questions of principle and drafts of technical requirements for compatible rendezvous and docking systems. Agreement was reached on a number of questions, but others remain for further discussion at a meeting scheduled for Moscow in mid-November.

Delegates discussed the possibility of future experiments between the two nations. The study of such experiments would be based on the premise that a first such experiment might be the docking of an Apollo spacecraft with a manned orbital scientific station of the Salyut-type.

Both Gilruth and Petrov expressed gratification at the rapid and substantive progress of their specialist working groups toward a comprehensive set of agreed requirements.

**Brock to Leave**  
(Continued from page 1)

where he had managed General Electric's computer operations, has degrees from Texas Tech and Texas A & M University. At A & M, he served as assistant to the dean of the school of engineering.



A REASON TO SMILE — Marilyn B. Ross recently received a Sustained Superior Performance Award. Martin L. Raines, Manager of the Reliability and Quality Assurance and Safety Office, made the presentation.

## Jamaica-U.N. Group looks at data

(Continued from page 1)

rine springs carry a portion of the water offshore into the Caribbean.

Allen H. Watkins, Manager of the Earth Observations Aircraft Program at MSC, said excellent data was gathered on the flights, which he said was supplemented by the most complete "ground truth" operation yet attempted by the MSC aircraft program. Jamaican and U.N. field teams moved about the island on an hourly basis in order to be in position when the MSC aircraft flew over. At the same time, scuba divers gathered information on water temperatures which will be used to spot check results obtained on a

large scale by the aircraft.

The seven-member group of geologists and hydrologists who were here for discussions was headed by John Williams, Director of the Jamaican Geologic Survey, and by David Wozab, Project Manager of the U.N. Development Programs, Jamaican Water Resource Development and Management Project.

The working sessions and discussions, based on data collected during the April mission, included such subjects as principles of photogrammetry and photo-interpretation, and the physics of remote sensing and its applications to hydrology, agriculture, forestry, and health problems.

## New Approach to Shuttle considered

(Continued from page 1)

the orbiter and the booster stages would proceed at the same time, we have been studying, in parallel, the idea of sequencing the development, test and verification of critical new technology features of the system. We now believe that a 'phased approach' is feasible and may offer significant advantages.

We believe that the additional studies we are now undertaking, together with those previously undertaken and now being completed, will put us in a position to make a decision this fall on the technical and programmatic approach to be followed in the Space Shuttle program."

*An apology to Ron Moxness of the U.S. Information Agency, author of the "Song of the Moon Men," which appeared in the last issue of the Roundup. His name was inadvertently misspelled.*

## 16 Site Selected

A mountainous highland region of the moon has been chosen as the exploration site for the Apollo 16 mission, scheduled to land on the lunar surface in March 1972.

The landing point is Descartes, named for a crater and located about nine degrees east and sixteen degrees south of the center of the moon as viewed from earth.



TICK TOCK, COMPLEX CLOCK—Daryl Chilcutt makes a slight adjustment on this Seth Thomas perpetual calendar clock, built in the mid-1800's. The most complex timepiece in his collection, the clock compensates for 28 and 31-day months and for Leap Year. The day and month on this particular clock are in Spanish. Daryl believes it was exported to Mexico by the Seth Thomas Company.

the school which advocates refinishing and "making the clock pretty."

Repair of the clock movement is time-consuming and intricate. However, no special tools are required. Daryl uses carburetor cleaner, a very caustic substance, to get rid of corrosion on the clock works.

Most of the clocks in his collection are American-made. His earliest timepiece is a grandfather clock which dates from the late 1700's to early 1800's. He has the movement or inner workings only and is building a case for it.

In addition to the perpetual

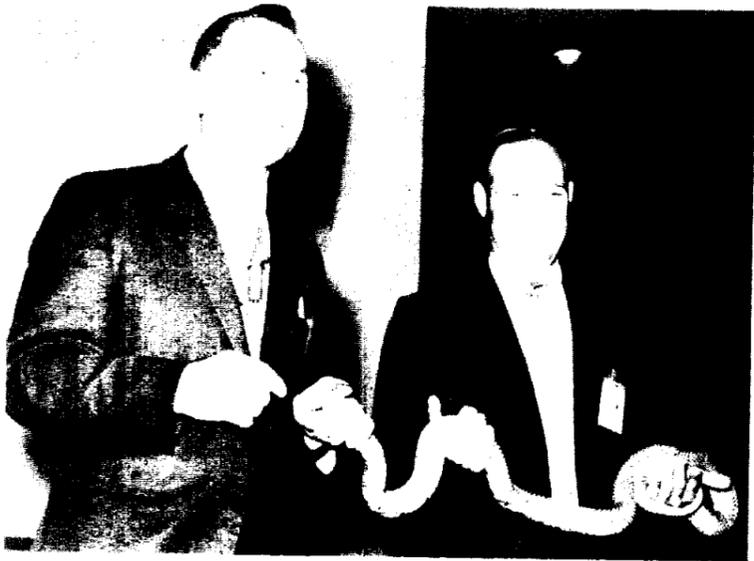
# ROUNDUP

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Editorial Staff: Sydni Shollenberger, A. "Pat" Patnesky



CONGRESSIONAL VISITORS—U.S. Senator Roman L. Hruska and Mrs. Hruska of Nebraska recently toured MSC. In this photo, Dr. W. W. Kemmerer (left), Chief of the Preventive Medicine Division, shows the Hruskas an Apollo beverage package as Astronaut John Young (2nd from left) looks on. Objects on the table include lunar rocks returned by the Apollo 14 crew; algae and liverworts treated with lunar dust; and germ-free pine seedlings, part of a botanical experiment.



"IF I SMILE, the snake won't know what I'm thinking," Charles Gott (right) of Mission Planning and Analysis Division may have been saying to himself. The MSC Safety Office recently invited John Werler (left), Director of the Houston Zoo, to discuss and exhibit snakes indigenous to this part of Texas. The snake Werler and Gott are holding is a harmless one. Others which Werler brought with him included the coral snake and a variety of rattlesnake. The demonstration attracted approximately 600 MSC employees, contractors and families.

## Lewis to celebrate 30th anniversary

Lewis Research Center in Cleveland is inviting former employees and retirees back to the laboratory to help celebrate its 30th anniversary on Friday, July 16.

Special ceremonies for employees, retirees, and other dignitaries will be held in the hangar on July 16 starting at 4:00 p.m. The annual employees' picnic will follow the hangar ceremonies and continue the anniversary theme. Retirees and former Lewis employees will be honored guests at the picnic.

On Saturday and Sunday, July 17 and 18, an open house will be

held for the general public. Between 15,000 and 20,000 persons are expected to attend.

## Vaughn retires

Donald K. Vaughn of the Apollo Spacecraft Program Office retired recently with over 25 years of government service to his credit. He was with the Department of Navy prior to his association with NASA.

Friends and co-workers treated him to a retirement luncheon at the Nassau Bay Motor Hotel.

## Powder Puff Girls win first tourney

The first year for EAA women's softball came to an exciting finish on Saturday, June 12 at the Ellington Air Force Base softball diamond.

The Powder Puff Girls of MSC won the playoff championship, the first of its kind, over TRW by a score of 17 to 5.

TRW earned the chance to play the MSC gals with a some-from-behind 26 to 23 victory over the regular league champion, IBM #1. The IBM team led early in the game, but TRW refused to buckle under.

The top four places in the playoff tournament and regular season are as follows:

	Playoff	Reg. Season
Powder Puff Girls	1st	2nd
TRW	2nd	4th
IBM #1	3rd	1st
Lockheed	4th	3rd

The all-tournament team is loaded with the hard-hitting Powder Puff Girls (PPG's).

Pitcher—Terry Reel	PPG
Catcher—JoAnn Birchett	PPG
First Base—Mary Kubena	IBM #1
2nd Base—Gay Williams	PPG
3rd Base—Linda Ande	TRW
Short Stop—Lorraine Erickson	PPG
Outfield—Ann Cattelle	PPG
Pat Brown	PPG
Dee Norris	IBM #1
Betty Waters	PPG
Erna Eharba	TRW
Utility—JoAnn Anderson	PPG
Most Valuable—Shirley Roberts	PPG



PPG's—(1st row) Jo Birchett, Gay Williams, Pat Brown, Shirley Roberts, Rindy McPherson, Betty Waters. (2nd row) Bob Reel, assistant manager; Jo Anderson, Terry Reel, Anne Cattelle, Martha Oetker, Irene Sanchez, Lorraine Erickson; and Ron Kiehn, manager. Missing from the photo are Diane Hanisch and Jamye Flowers.

# Roundup Swap-Shop

(Deadline for Swap-Shop classified ads is Thursday of the week preceding Roundup publication date. Ads are limited to MSC civil service employees and assigned military personnel. Maximum length is 20 words, including name, office code and home telephone number. Send ads, typed or legibly written, to Roundup Editor, AP3)

### MISCELLANEOUS

Baldwin spinet piano w/bench. Like new, mahogany, \$550. Fairbank, 488-2777 after 5 pm.  
Dining room table, banquet size, antique, mahogany. Can be used as regular size w/2 console tables, \$500. Also dining room chairs, six. Fairbank, 488-2777 after 5:00 pm.  
Stereo Hi Fi record player, radio, Grundig, console. Needs servicing. Best offer. Fairbank, 488-2777 after 5:00 pm.

Kenmore sewing machine, newly renovated, desk-style cabinet, carrying case for portable use, \$50. Chady, 481-1502.

B-Flat clarinet, used only three months, \$100. Chady, 481-1502.

Mexican quartz chess set w/like board, red and white, \$15. Riegert, 877-1834.

Washing machine and gas dryer, good cndn, \$75 for both. Duoto, 966-1612 after 5:00 pm.

Golf clubs, bag, cart for \$75. Richardson, 946-7587.

11 cu ft Norge refrigerator, runs good, \$30. Davis, 482-7820.

Yashica Lynx-14 E, 35 mm camera. 1.4 lens, IC meter, xln cndn, \$60. Musgrove, 488-3966.

Near new spinet piano, \$375; antique oak buffet, beveled glass, \$75; running German wall clock, \$75. Franklin, 644-0853.

Accordion, Gabelini 120 bass w/3 and 7 shifts, xln cndn, complete, \$250. Newlin, 481-2121.

Kawai console piano, like new, \$595. Falbo, 645-7093.

4 tires, deep tread, w/w tubeless, Firestone deluxe champions, 8,000 miles, \$40 or best offer. Hooper, 488-4120.

Beretta Silver Snipe 12 gauge, O/U-IC/mod, plain barrels, recoil pad, good cndn, \$150. Smith, 877-1056.

Hi-Fi rig, Akai M-6 4-track stereo tape recorder w/speakers and integrated Garrard type A turn table. Good cndn, \$200. Crotty, 483-3541.

Dryer, gas, Whirlpool. Works well except needs new valve, \$25. Handley, 482-7041.

Twin beds, box springs, foam mattresses w/frames on casters, \$100. Taylor, 944-5818.

Couch, 3-cushion, black & white plaid tailored slipcovers, red floral print cover, xln cndn, \$150. Taylor, 944-5818.

Sears 23" B/W TV, AM-FM, stereo entertainment center, over \$400 new. Changer needs work, \$110. Lindemuth, 482-1086.

22" rotary power mower, \$10. Cabinet for 15" speaker, needs refinishing, free. Lindemuth, 482-1086.

Pair of barrel-shaped, high-backed, upholstered Danish modern chairs, sea foam green, \$95. Foam cushion d.m. chair, \$15. Lindemuth, 482-1086.

2-ton Mathes air conditioner, window unit, 230 VAC, good cndn. Lippitt, M19-3200.

8.25x14 Goodyear whitewall power cushion tire, never used, \$17.50. Thompson, 932-3653.

Dinette w/4 chairs, \$35; couch and chair, \$35; coffee table, \$12; Sony TC-105 tape-recorder, best offer. Marar, 488-6027.

CONN Conquest trombone, King box case, Bach mouthpiece, misc music & equipment. Perfect for student, \$104. Pozmantier, 723-2445.

Lady Remington electric steam hair roller set, good cndn, \$12. Newton, 941-1774.

Hetrick tent, 8x10, like new, cabin type, make offer. Thiel, 946-6814.

Clear Lake Country Club membership, play now—pay later. Vetter, 488-0275.

20-gallon aquarium, stand, filter, pump, light, everything including the fish, \$50. Lohman, 487-4233.

New Nikkormat FTN 35mm, w/50mm F1.4 lens, eyecup, leather case, \$250. 2X Soligor teleconverter to fit Nikkormat automatic, \$20. Isumar mirage filter, \$15. Christman, 483-4511.

Heavy duty Yazoo lawnmower, ideal for big yards or weekend places in the country, \$85. Stephens, 481-0095.

4-piece sectional sofa, xln cndn, 2 end tables and coffee table, \$75 for all. Kirkland, 932-4101.

Wizard-21 push-type rotary mower w/grass-leaf catcher, 3 HP Briggs & Stratton engine, only used one summer. New \$64, sale \$38. Bass, 534-3890.

Gasoline edger-trimmer, adjustable blade angle, 6-position front wheel, 2.0 HP B & S engine. Approx 3.5 hrs usage, like new, \$43. Bass, 534-3890.

Yard and garden tools, shovels, ax, hoes, rakes, shears, etc. 25-50% off retail. Call for availability. Bass, 534-3890.

3 1/2 gallon galvanized, welded steel lawn and garden sprayer, xln cndn. New, \$18; sale, \$12. Bass, 534-3890.

Chickering upright piano, completely overhauled and refinished. The "tops" of upright pianos; beautiful tone, \$290. Bass, 534-3890.

### VEHICLES

68 Chevy 327, big port heads, 4-barrel manifold and Quadrajet carburetor. Newlin, 481-2121.

68 Camaro sport coupe, 327, air conditioned, power steering, 33-speed, red finish, \$1,650. Cosby, 966-2781.

67 turquoise Pontiac GTO, 4-speed, air conditioned, sun tack, Mag wheels, black

interior, hooker headers, xln cndn. Price open. White, 877-3153.

58 MGA roadster, wire wheels, asking \$350. James, 488-5159.

70 Chevrolet Nova, air, automatic, 307 engine, gold, 2-dr hardtop. Equity negotiable, take up payments. Wilton, 932-5273 after 5:30 pm.

66 Mustang convertible, air, autotrans, powersteer, powtop, radio, xln cndn, \$950. Bigham, 591-3717 after 6:00 pm.

66 Chevelle Malibu, 2-dr, hardtop, 4-speed, A/C, 327 W4/barrel, new WW tires, high performance, \$750—best offer. Brown, 488-0649.

Bikes, Sears 20-inch boy's model, good cndn, \$15; convertible model, fair cndn, \$10. Handley, 482-7041.

Wheelcamper Lodgewagon, sleeps 6, central heat, press. water system, chemical toilet, xln cndn. Lamar 479-6651.

65 Buick sportwagon, seafoam green/white top, auto, air (new A/C), power, radio, trailer hitch, tinted glass, vinyl upholstery, radial tires, \$995. Moore, 488-2204.

70 Suzuki 90 MX, w/GYT kit, \$275. 488-5037.

68 Volvo 142, green, AM/FM, good cndn, \$1650. Clancy, 941-0251 after 5 pm.

64 Corvette, both tops, air, AM-FM, 4 spd, 300 hp, \$1675. Bentley, 591-3001.

68 VW Bug, AM-FM, 30,000 miles, \$1325. Bentley, 591-3001.

70 Honda CI 350 K2, electric start, xln cndn, \$675. Shone, 488-0157.

Motorcycle trailer \$100. Wilson 483-2540.

65 Karmann Ghia, xln cndn, \$850. Spurlin, 488-3475 after 5 pm.

68 VW Bus, air, clean, one owner, \$1800. Robinson, 482-3309.

Honda 90 Frame, Incomplete Engine, Misc. Parts, \$15. Mark, 488-5037.

68 Corvette-Hardtop, 4/speed, all power, A/C, custom paint, \$2600. Grisby, 941-3710.

66 Dodge Dart 4 door Sedan. Radio and air, automatic. First rate cndn, \$225 below the Blue Book retail value. Sale price of \$725 —Call Rubenstein, 877-3288.

Girl's 24" bicycle, \$5. Lindemuth, 482-1086.

### BOATS

15' Lapstrake boat, motor & trailer, 35 hp Evinrude, all electric. Complete, \$250. Newlin, 481-2121.

14' aluminum semi-v hull fishing boat, 18 HP Evinrude, heavy duty big wheel trailer, ready to go fishing. Lamar, 479-6651.

69 Larson Shark, 18.5', 85 HP Johnson, Sportsman trailer, xln cndn. Aldrich, 482-1153.

15' boat and trailer, 40 HP motor, hardtop and ski equipment, all in xln cndn. Henderson, 471-4653.

### REAL ESTATE & RENTALS

Lot on Lake Livingston, 75x137, Point Lookout, \$3500. Richardson, 946-7587.

Townhouse, CLC, large 2 bdrms, 2 1/2 baths, 2 car garage, facing golf course. Equity, 6% FHA loan at \$180/mo. Duoto, 966-1612 after 5:00 pm.

100'x200' wooded (large trees) residential lot in Dickinson, Oak Hollow (Section 2) subdivision. Middleton, 482-1053 after 5 pm.

League City, 705 Newport, 3-2-2, large family room, low monthly, Mayhew, 932-3971.

Clear Lake City, 3-2-2, formal living and dining rooms, family room w/fireplace, cul-de-sac, FHA appraisal \$27,600, equity \$5,500, balance \$20,900, \$182/mo., 6%. Spurlin, 488-3745.

For lease, Seabrook 4-2-2 Spanish all brick, 10 min. to MSC. Walk to Elementary/Jr High and Shopping Center. Central air, appliances, carpeted. \$215.00 month. Baker, 877-3149.

4-2-2, Friendswood, 1/2 acre wooded lot, Cul De Sac, 2400 Sq. Ft. After 6:00 p.m., Grogan, 482-7286.

Beach home for weekly rental at Spanish Grant, West Galveston. On beach, well-furnished all but linens. Wasson, 488-2722 after 6 pm.

CLC 3-2-2, formal dining room, fireplace, fenced, trees, 6-3/4%, equity. Call 488-5391.

Lakefront lot, 50x125 in Holiday Lakes. 30 minute east of NASA. 3 lakes, 3 parks, 2 swimming pools. Hunting, riding. Large Pecan trees. \$2500 firm. Strickland, 946-7173.

80x200' Beautifully wooded lot, Dickinson. All utilities \$4500. Plauché, 474-2660.

For rent in Friendswood, 3-2-1 home, central air, built-in range and oven. 408 Avondale. Nelson, HU2-1817.

### WANTED

Ride from Texas City to Building 30, 8:00 to 4:30 pm. Letts, 948-4134.

Young female Dalmatian dog. Must be registered, reasonable. Blackburn, 932-5412.

Used VW bus in good condition. Speller, 932-5653.

Small capacity cement mixer. Bristow, HU 5-2219.

Three MSC co-ops desire round trip transportation to the Cape for Apollo 15 launch. Will share expenses and driving. McCandless, 483-3816.

19-year old will babysit, anytime, experience, references. Alford, 488-3484.

Ride from Miramar area, Seabrook, to Bldg 2, 8:30 hours, mornings only. Bloch, 483-5410.

### PETS

Irish Setter pups, AKC, FDSB. National

Championship field trial and show lineage. Morris, 591-2910 after 6:00 pm.

Miniature Schnauzer, beautiful salt and pepper AKC puppies. Multi-champion blood lines. Wormed and shots, \$100. Ream, 877-4308.

Siberian Huskies, beautifully marked, puppies, friendly and extremely rugged. Joerns, 591-3330.

Adorable reg. tailless Manx kittens, show quality rumpies, \$75 with or \$50 without papers. Young, 925-3312.

Elegant reg. Borzoi puppies, show quality, English bloodlines. Bargain at \$175 before weaning. Young, 925-3312.

## Toastmasters hold Installation dinner

The MSC Toastmasters Club had its installation banquet at the Edgewater Restaurant on Tuesday, June 22. Jack H. Cohen, outgoing president, presided as master of ceremonies, and Joe Robinson, International Area Governor of Toastmasters, installed the new officers.

Alfred Menchaca of Mission Planning and Analysis Division is the incoming president. Serving with him for the next year will be Richard Gillen, educational vice-president; Don Graves, administrative vice-president; Henry Williams, secretary-treasurer; and Roy Bobo, master host and sergeant-at-arms.

## Conway is winner of golf tourney

Mike Conway scored the low gross score for the day and won first prize in the championship flight when the MSC Golf Association held its fourth tournament of the year. Other winners in the championship flight were Pete Petersen, second with a net 70; Jim White, third with 71, and Bill Chase, fourth with 73.

Russell Miller ran away with the second flight with a net 66, and Mike Hendrix, Bart Batson, and Reagan Redman tied for second with 77's. Harry Kolkhorst grabbed the top spot in the second flight with a net 71; Joe Siegfried was second with 73; and Lou Braun and Norm Worley tied for third with 75's. In the third flight Gerry Kenney was the winner with a net 70, Rick Coblenz and Ben Hood tied for second with 72's, and Bob Lacy was third with a 73.

## Discount available to FBA members

The Alley Theatre is offering tickets to all six plays of the 1971-72 season at a substantial discount to members of the Federal Business Association.

Tickets must be purchased no later than July 9. Merv Hughes, extension 7311, can supply additional information.